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Modes of birth and their impact on the psychological and physical health of women

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ABSTRACT

Objective. The aim of this review was to evaluate the literature concerning modes of birth and their impact on the psychological and physical health of women. Methods. A search was conducted in PubMed Central and Scopus to identify relevant studies in the literature. The searching phrases were "mode of birth" AND "maternal health". No date restriction was applied. The languages were restricted to English, German, and Greek. Results. Women giving birth through assisted vaginal births, especially by means of forceps, had a higher risk of dealing with different health problems in the postpartum period. Caesarean sections are not able to prevent long-term problems related to incontinence or sexuality. Conclusions. The mode of birth has an impact on the health of women postpartum and in some cases in the long term. Therefore, the mode of birth should be chosen deliberately for each individual woman, while having in mind the possible risks of the different modes of birth. Additionally, further research is needed to highlight the prevalence of postpartum morbidity.

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Introduction

Giving birth often leads to physical and emotional problems, which mostly increase with the passage of time [1]. In a study by MacArthur et al. in 1991, which was an early attempt to record maternal morbidity in the first year postpartum, 47% of women described one or more new physical health problems since giving birth, lasting for a minimum of 6 weeks [2]. In an Australian study in 1998, 94% of the women reported health problems during their first 6 month-postpartum period [3]. Williams et al. also found a high morbidity level at 12 months postpartum, with 87% of the interviewed women reporting at least one health problem [4].

While medical attention during pregnancy is high in most Northern and Western European and North American countries, medical attention often wanes during the postpartum. In most countries, women have one visit to their gynecologist after approximately 6 weeks postpartum. Furthermore, nowadays, women are discharged from the hospital sooner than they were a few years ago, which means that few women benefit from ongoing medical care after birth [1]. Many women with physical or emotional problems do not consult a healthcare professional and therefore, the true extent of postpartum morbidity is not clear [2]. According to Brown and Lumley, 28% of the women that had reported health problems did not consult a health professional [3].

According to Vila-Candel and colleagues, large variability in the rates of Caesarean section are evident across different countries. In addition, differences between hospitals within the same region can be significant [5]. In most OECD countries, the rates of Caesarean deliveries have increased over the last decades. The Northern countries (Iceland, Finland, Sweden and Norway), Israel and the Netherlands had the lowest Caesarean section rates in 2015, ranging from 15% to 17%, whereas Turkey, Mexico and Chile had the highest rates ranging from 46% to 53% [6]. Moreover, the rates of assisted vaginal deliveries have increased in many countries. In Sweden, the use of vacuum extractions has increased from 11.5% in 1992 to 14.8% in 2010 [7]. In contrast, the rate of assisted vaginal deliveries has decreased in Germany to 6% [8].

The aim of this review was to evaluate the literature concerning the mode of birth and the maternal physical and psychological health problems during the postpartum.

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Materials and Methods

The literature search was conducted in PubMed Central and Scopus using the terms “mode of birth” AND “maternal health”. The term “mode of birth” had to be found in the title. No date restriction was applied. Languages were restricted to English, German and Greek. Additional studies from the reference lists of the articles were searched, as it has been shown that the ‘snowballing’ method increases the chance of identifying all the studies dealing with a certain topic [9].

Results

In this section, only the most frequent symptoms on women’s postpartum health related to mode of birth are reported.

1. Psychological Health

1.1. PTSD Symptoms

According to Rowlands and Redshaw, unplanned Caesarean sections, including urgent and non-urgent Caesareans, were associated with a slightly higher risk of developing two or more PTSD symptoms after 1 month postpartum compared to women who had given birth spontaneously. Furthermore, women who had given birth by means of forceps had a significantly increased risk of having PTSD symptoms postpartum [10].

1.2. The quality of life

A study using the EQ-5D-5L questionnaire [11] to measure life quality in 46 women with Caesarean sections and 178 women with vaginal births in India showed that women giving birth by Caesarean section had lower levels of life quality postpartum. Furthermore, episiotomy in natural births lowered these levels to a smaller extent than Caesarean sections.

1.3. Extreme tiredness / Exhaustion

According to Thompson et al., who monitored 1,295 women in Australia in 1997, women giving birth by Caesarean section reported more exhaustion and lack of sleep than women undergoing unassisted vaginal birth [12]. Woolhouse and colleagues reported that women who gave birth by Caesarean section were more likely to report extreme tiredness at 6 and 12 months postpartum than women giving birth spontaneously [13]. Women who had given birth by means of forceps had a higher risk of reporting fatigue at 1 month postpartum than women who had given birth spontaneously [10].

1.4. Feeling unhappy

Unhappiness for more than a few days was reported by most women experiencing an emergency Caesarean section and an assisted vaginal birth. Women giving birth spontaneously reported feeling unhappy the least often of all. Women experiencing an elective Caesarean section had a higher risk than women giving birth spontaneously [14].

2. Perineal Morbidity

2.1. Incontinence

Giving birth by Caesarean section reduced the risk of urinary incontinence in the first 8 weeks [12] and at 3, 6 and 12 months [13] compared to unassisted vaginal births. Nevertheless, at 6 months postpartum, women who had given birth by Caesarean section had higher risks of other urinary problems, for example passing urine often or having trouble passing urine, than women who had given birth spontaneously [12]. Women giving birth through instrumental vaginal births (forceps or vacuum extraction) had a higher risk of urinary incontinence [3,14], especially when giving birth by means of forceps [4,15].

2.2. Perineal pain

Women giving birth by Caesarean sections had less perineal pain in the first 8 weeks than women giving birth spontaneously. More perineal pain was reported by women giving birth by means of forceps or vacuum extractions compared to women giving birth unassisted [3,10]. According to Brown and Lumley, women who underwent episiotomy reported perineal pain twice as high as for women who had a tear that required sutures [3].

2.3. Sexual morbidity/ Resumption of Sexuality

Assisted vaginal births had a higher incidence of sexual problems than unassisted vaginal births [3,12]. At 6 weeks postpartum, fewer women who had given birth by means of forceps had resumed coital sexual relations compared to women who had given birth spontaneously [15]. Hjorth et al., who investigated the mode of birth and women’s long-term sexual health, found that giving birth by Caesarean section did not protect against sexual morbidity. On the contrary, women giving birth only spontaneously or even through vaginal birth after a Caesarean section had a smaller risk of long-term sexual problems than women giving birth by Caesarean section. These authors also reported that women who had given birth through instrumental vaginal birth did not have a higher risk of long-term sexual problems compared to women who had given birth spontaneously [16]. According to Brown and Lumley, women who underwent episiotomy reported more sexual problems [3].

3. Back pain

According to Woolhouse et al., women giving birth by Caesarean section were more likely to report back pain at 6 and 12 months postpartum compared to women giving birth spontaneously [13]. Rowlands and Redshaw reported that women who had assisted vaginal births had a higher risk of reporting back pain [10].

Discussions

Physical and psychological problems after childbirth are common, and may have an important negative and long-term effect on women's well-being and daily functioning. The mode of birth may be one important factor influencing women's health and well-being following birth; however, population-wide evidence on this relationship is limited.

A large percentage of women who have given birth report one or more physical or psychological problems in the first months postpartum [2–4]. Nevertheless, there remains a lack of research on the postpartum health of women [10]. One reason may be related to under-reporting, as many affected women do not speak about their problems to a health care professional and many health care professionals do not actively ask about possible health problems during the postpartum period [2,3]. Studies have shown an association between the mode of birth and physical and psychological health problems [2–5,10–17] although rates of different birth modes (spontaneous vaginal birth, planned/unplanned Caesarean, assisted vaginal birth) differ substantially between countries and even between hospitals in the same region [5].

The effects of the mode of delivery on the physical and sexual health of women are often ignored by both parenting couples and their physicians, presumably because of the enthusiasm and concern of being a new parent and the focus on good obstetric outcomes. However, many couples and even their physicians are concerned about the negative effects of vaginal birth on sexual function, which may lead them to choose birth by Caesarean section (CS). Women—including obstetricians themselves—who choose CS as the mode of delivery often do so out of concern about the effects of the vaginal delivery on vaginal tightness and sexual function. Yet, Caesarean section is not superior to vaginal birth in preserving normal sexual function, regardless of short-term postpartum effects. Women should be informed that, irrespective of the mode of delivery chosen, sexual function 6 months after childbirth is comparable to that in pre-pregnancy.

Given the sudden and unexpected nature of Caesarean section (EmCS) necessitated by emergency, along with an increased risk of psychological distress, it is particularly important to recognize the psychosocial consequences for women. Emergency Caesarean Sections (EmCSs) can negatively impact several psychosocial outcomes for women, in particular post-traumatic stress. While investment in technologies and clinical practice to minimize the number of EmCSs is crucial, further investigations are needed to develop effective strategies to prepare and support women who undergo this mode of delivery.

It is important to distinguish between the different types of instrumental births in future studies. The higher rate of posttraumatic-type symptoms among women who undergo forceps-assisted vaginal births compared to other modes of birth is a current concern. Women who undergo forceps-assisted birth should be monitored carefully during the postnatal period, and be given the opportunity to discuss their labor and delivery experiences post hoc.

More research is needed to show the importance of choosing the mode of birth while having in mind the impact it can have on the woman and her child. Health care professionals should be educated regarding the potential positive impact of such programs on the postpartum health of women [18]. The World Health Organization (WHO) projects that only 10-15% of all births require Caesarean section. According to WHO, women and newborns not needing a Caesarean section realize no benefit from the operation yet incur risks to herself, her child and future pregnancies [19]. For example, a study by Peters et al., on 491,590 mothers and their newborns found that neonates born by spontaneous vaginal birth had fewer short and long-term problems [20]. Kasser et al. showed that vaginal birth prepares the newborn for the postnatal life as it gives the newborn respiratory, cardiovascular and homeostatic advantages in comparison to the neonates born by elective Caesarean section [21].

Our analyses had a significant limitation in that the existing literature was not evaluated systematically, but narratively. Systematic reviews require greater resources; nevertheless, an attempt was made to present a balanced picture of the existing literature.

Conclusions

The mode of birth is associated with physical and psychological health problems during the postpartum. Assisted vaginal births, especially with by means of forceps, are also associated with increased risks. Some of these problems are associated with PTSD symptoms, experiencing extreme tiredness, having to deal with perineal morbidity such as incontinence, perineal pain, sexual problems and back pain. Planned Caesarean sections do not protect from long-term problems such as incontinence or diminished sexual response. Moreover, women giving birth by Caesarean section had lower levels of life quality and reported extreme tiredness more often than women experiencing other birth modes. Future research should examine additional factors that may influence women’s sexual life after childbirth and evaluate the impact of the mode of delivery on the physical and psychological function of women using longitudinal analyses.

Conflict of interest disclosure

There are no known conflicts of interest in the publication of this article. The manuscript was read and approved by all authors.

Compliance with ethical standards

Any aspect of the work covered in this manuscript has been conducted with the ethical approval of all relevant bodies and that such approvals are acknowledged within the manuscript.

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